

The Files

17 April 1959

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Trip Report - R&D Discussions at []

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1. From 15 March to 1 April 1959 the writer visited [] and [] to participate in preliminary testing of the Automatic Agent Set, AS-3. A detailed summary of those tests is the subject of a separate report. Of great profit to the writer during this trip was the exchange of comments and ideas concerning communications R&D in general, and it is the purpose of this memorandum to record some of the many field suggestions concerning R&D policy and equipment.

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2. Chief, [] said that the promptness of Headquarters response to several recent engineering requests had been most gratifying. He was given a status report on those R&D projects with which the writer is familiar and said he had been following with special interest the progress of the AS-5. The long developmental cycle of agent equipment was discussed at length, with special attention to the gap between the prototype stage and the production decision. [] who is in a large measure sympathetic to the problems of R&D in this regard, said he had difficulty explaining to the DD/P representatives in [] the long delay between publication of a project in the R&D Report and delivery of equipment to the field. He suggested that a DD/P notice explaining stage by stage the developmental process of agent equipment and pointing out the need for "customer requirements" prior to production, would enhance field understanding of our R&D problems.

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3. Members of the [] staff briefed the writer on those operational considerations peculiar to [] such as the predominance of [] agents and the consequent requirement for extremely small equipment, especially receivers and keyers. Because sophisticated enemy intercept techniques jeopardize an agent who remains long on the air, [] has no intention of equipping agents with on-line keyers, except as aids to inserting messages into off-line storage devices such as the TRIX recorder. Since so much of its equipment has to be concealed on the person for border crossings, EICA suggested that future agent equipment be no thicker than the RS-6 (approximately 2").

4. [] has a large number of active agent circuits, principally one-way broadcast operations, and is impatient for equipment with which to outfit new agents. New agents can be launched with no more equipment than a receiver and an ingeniously disguised crypto pack, and once

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they are in place they can be given instructions by broadcast regarding delivery of a transmitter and other equipment. Since only a few

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Consequently, there is much more concern in [] about the size and availability of an agent receiver than with its sensitivity or calibration accuracy; resettability remains an important requirement, however. The development of a pocket-sized transistor receiver capable of tuning 3.5 to 6 mc or 3.5 to 12 mc was said to be [] primary equipment requirement at the present time. The Head-quarter's cable agreeing to furnish 40 crystal-controlled receivers by 27 May was received enthusiastically at [] They would have preferred, they said, a tunable receiver - such as an RCA pocket portable with its tuning range shifted to 3.5 to 6 mc or so, but any solution at all to the problem is welcome. Various designs for a collapsible battery holder for size D cells were also discussed.

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5. The philosophy that any equipment is better than none was encountered at [] time and again. It is the only defense, for example, for the German TRII recorder, an "ersatz" tinkertoy with little to recommend it beyond a price we can afford and sterility for which we can be grateful. [] is fully aware of its limitations, however, and admits to using it only in desperation. No active agents have been equipped with this recorder as of 1 April but it has been used, with disconcerting success, in many training contacts. During the writer's visit a British recorder known as FIGORD, which is flatter and much more professional appearing than the TRII, was being examined at [] and its initial impression on everyone was favorable.

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6. Operations officers on the [] staff were pleased to learn that we are developing a Digital Display System, DS-1, and an Agent VFO, OS-4, and predicted that these devices would find widespread use in [] The references to these developments in recent R&D reports have apparently passed unnoticed in [] and there may be some merit in the Chief, [] suggestion that this report be made more readable to Commo and less available to DD/P.

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7. The operational situation in [] is different in many respects from that in []

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Subminiature construction does not therefore offer the advantage it does in [] and may actually be a disadvantage in [] due to the increased cost and added complexity of maintenance. [] stated that a requirement exists there for a small low-cost transistor receiver similar to the RR-33 which would allow []

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8. The miniature hand key developed for the TAILOR project was shown to the operations staff at [] The standard agent package used by [] contains a large Signal Corps J-38 hand key which [] would like to replace with the TAILOR key. Accordingly, [] was told that they would be advised of the stock number of these keys so that they could requisition them through normal channels.

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9. Chief, [] indicated that the informal discussions of R&D and operational problems held during this visit had been mutually profitable and suggested that a representative of the R&D Laboratory be sent on a similar trip in the near future.

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10. Chief, [] expressed his pleasure that the preliminary operational test of the AS-3 had been held in the field, and said he hoped that this procedure would be followed more frequently in the future.

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